# SOCIO-ECONOMIC ASSESSMENT OF DIRECT SALES IN SICILIAN FARMS

## S. TUDISCA, A.M. DI TRAPANI, F. SGROI\* and R. TESTA

Department of Agricultural and Forestry Sciences, University of Palermo, Viale delle Scienze, Edificio 4, 90128 Palermo, Italy \*Corresponding author: Tel. +39 091 23896615, Fax +39 091 484035, email: filippo.sgroi@unipa.it

## **ABSTRACT**

Many farmers today adopt direct sales as an entrepreneurial strategy in order to achieve a competitive advantage. The aim of this study has been to analyze the role that direct sales play in Sicilian farms and how the short food supply chain is able to valorize the endogenous resources of rural areas and increase the net income of farmer. Our results showed that direct sales, in conjunction with conventional sales, can represent a growing opportunity for farmers and lead to an improvement in the economic performances of agricultural businesses, an increase in farm investments and the creation of new job opportunities.

<sup>-</sup> Keywords: direct sales, entrepreneurial strategies, short supply chain, small and medium enterprises (SME) -

#### 1. INTRODUCTION

Competitive advantage represents the result of a strategy that leads an enterprise to occupy and maintain a favorable position in the market in which it operates, thereby obtaining a higher profitability than its competitors (TUDISCA et al., 2013a). In order to compete in the global market, farmers have to be able to change their entrepreneurial strategies and improve their economic performance, thus incorporating 'added value' (CHINNICI et al., 2013a; STURIALE and SCUDERI, 2013; VEIDAL and KORNELIUSSEN, 2013). The higher profit margin obtained allows a higher level of self-financing and a greater return on the invested risk capital (SANTERAMO et al., 2012). Considering the difficulties that farms have to be competitive (high production costs, low sale prices of agricultural products, shortage of labour), direct sales could represent a way to achieve a competitive advantage and improve profit margins.

Direct sales, through the reduction of intermediaries along the supply chain, can affect the annual budget of a farm by allowing the farmer's family to obtain a dignified remuneration for the use of their productive factors (RIZZO and MAZZAMU-TO, 2009; POLIDORI et al., 2008). With direct sales, the farmers are not subject to the price offered to them; they may decide to become price-makers (SACCOMANDI, 1999) and apply a different price, one that is higher than the one that is determined in the case of sales to fruit and vegetable wholesale markets or contracts with the Large Organized Distribution (LOD). This type of sale fully utilizes the work of the farmer's family and produces positive effects on the farm's economic performance because it increases the available liquid assets in the business and lowers the capital required for the coverage of the short-term debts that are present during the management activity of the farm (DITRAPANI et al., 2013). This is a worthy outcome, especially in rural territories where agriculture is the main economic activity and where the pricing of farm production represents the strategic variable for the success needed to relaunch farm competitiveness and boost the local economy, thereby avoiding the phenomena of rural exodus (TUDIS-CA et al., 2014a; RIZZO and GIUDICE, 2013; TU-DISCA et al., 2011; BULIN, 2011; BRUNORI et al.. 2002). All of this is fostered by a general increase in the public interest in issues such as ecology and the health and welfare of animals, as well as a growing distrust in the quality of food products derived from conventional agriculture (TUDISCA et al., 2014b; CHINNICI et al., 2013b; BRUNORI et al., 2012; BRIAMONTE and GIUCA, 2010; HARVEY et al., 2004). Direct sales allow consumers to obtain more reasonably priced fresh, healthy food and foster ecological sustainability, as represented by the reduced food miles and carbon emissions flowing from sustainable farming (LITTLE et al., 2009; FEAGAN, 2008). The decreased amount

of food miles can result in a lower level of environmental pressure due to a reduction in key factors such as air pollution, soil pollution, loss of biodiversity and noise pollution and can also reduce social pressures that can contribute to problems arising from road accidents and animal welfare issues (VAN PASSEL, 2013). Finally, direct sales can reconfigure relations between producers and consumers, assuming a social justice characteristic (FEAGAN, 2007), and can encourage more harmonious community relations (WINTER, 2003) and more democratic participation of participants in the food supply chain (HINRICHS, 2003).

The aim of this paper, as well as in other studies (PETER et al., 2010; HOLLOWAY, 2008; SON-NINO and MARSDEN, 2006), has been to analyze the role of direct sales in Sicilian farms and to determine how the short food supply chain is able to valorize the endogenous resources of rural areas and, consequently, the economic profitability of farmers, who seek to enhance their value along the food supply chain. In particular, it has been carried out an empirical analysis on a sample of farms that adopted the direct sales in order to analyze their structural characteristics, the motivations that led farmers to undertake this selling strategy and its benefits for farms.

#### 2. MATERIALS AND METHODS

In order to analyse how direct sales can contribute to obtaining a competitive advantage for Sicilian farms, we carried out an empirical analysis on 30 small and medium enterprises (SMEs) that adopted this entrepreneurial strategy. The survey was conducted in 2013 by means of faceto-face interviews with farmers, using a specific questionnaire (TUDISCA et al., 2014c; RAFFAELLI et al., 2009; MARBACH, 2000) divided into three parts. In particular, in the first section we collected the information related to the structural characteristics of farms, their agri food products (product portfolios), the socio-demographic characteristics of farmers, the quota of farm production destined to direct sales and its sales modality (farm outlets and/or farmers' markets). In the second one we asked to farmers the reasons that led them to adopt a short supply chain strategy and the benefits reflected in the business performance by its adoption. In this case interviewees had to assign a score to a 1-5 scale to each possible predefined question (TUDISCA et al., 2013c; TRABALZI and DE ROSA, 2012). This scale, better know as Likert scale (LIKERT, 1932), is a psychometric scale commonly involved in research that employs questionnaires. It is the most widely used approach to scaling responses in survey research. When responding to a Likert questionnaire item, respondents specify their level of agreement or disagreement (strongly agree, agree, uncertain, disagree, strongly disagree) on a symmetric agreedisagree scale for a series of statements by attributing a score for each one (5, 4, 3, 2, 1). Thus, the range captures the intensity of their feelings for a given item (NORMAN, 2010; BURNS and BURNS, 2008; ALLEN and SEAMAN, 2007).

In the third section, we collected information in order to determine the net income of farmers, by means of the following formula:

$$NI = GPV - \sum_{i} C_{i} \tag{1}$$

where:

NI = net income of farmer;

GPV = gross production value of agri food products:

 $C_i$  = costs of productive factors that have not been conferred by entrepreneur.

Finally, in order to better quantify how direct sales allowed farmers to remain competitive in the market, it has been compared this value to the net income that farmer would obtain by conferring all farm production exclusively on traditional sales channels.

The empirical survey responses showed that the surveyed farms had an average area of 8.39 ha and ranged from a minimum of 4.50 ha to a maximum of 13.56 ha (Table 1).

The majority of enterprises produced fruit and vegetables (8), followed by milk, cheese and dairy products (6), olive oil and fruit (5), vegetables (4), grapes, wine and fruit (4), grapes and wine (2) and olive oil (1). All of the surveyed farms were worked directly by the farmer's family. The majority of our sample (18 farmers) had used direct sales for more than five years, while the remaining farmers had applied this entrepreneurial strategy in the past three years. Males accounted for 63.3% cent of the entrepreneurs and 36.7% were females. The majority of the entrepreneurs (60.0%) were aged between 31 and 40 years; only 13.3% were over 60 years. These responses highlighted how direct sales strategies have been used mainly by young entrepreneurs, unlike the Sicilian primary sector, where farmers are generally of an advanced age (MASSOLI

Table 1 - Surveyed farms and socio-demographic characteristics of farmers.

Farms (No.)	Farm size (ha)	Agrifood products	Age	Sex		Educational
				Male	Female	qualification
1	7.09	Milk aboas and dains products	22	. v		Dagraa
1	7,98	Milk, cheese and dairy products	32 40	X		Degree
2	6,50	Fruit and vegetables		X		Degree
3	8,90	Fruit and vegetables	60	X		Secondary school
4	4,50	Fruit and vegetables	36	X		Higher school
5	6,55	Milk, cheese and dairy products	40		х	Degree
6	4,80	Fruit and vegetables	33		х	Higher school
7	7,98	Milk, cheese and dairy products	28		х	Higher school
8	6,40	Olive oil and fruit	38	X		Degree
9	10,30	Milk, cheese and dairy products	42	x		Higher school
10	9,85	Milk, cheese and dairy products	34		x	Higher school
11	9,58	Grape and wine	35	x		Degree
12	7,89	Olive oil	55	x		Secondary school
13	8,65	Vegetables	26		x	Higher school
14	10,80	Milk, cheese and dairy products	38	x		Degree
15	12,80	Fruit and vegetables	48	x		Higher school
16	9,70	Fruit and vegetables	34		x	Higher school
17	12,63	Olive oil and fruit	65	х		Secondary school
18	13,50	Vegetables	37		х	Higher school
19	8,65	Grape, wine and fruit	72	х		Secondary school
20	8,90	Grape and wine	40		x	Degree
21	6,56	Vegetables	66	х		Secondary school
22	9,85	Grape, wine and fruit	33		x	Higher school
23	8,63	Vegetables	39	х		Higher school
24	13,56	Grape, wine and fruit	46	х		Higher school
25	6,90	Fruit and vegetables	35		х	Degree
26	7,80	Olive oil and fruit	29	х		Higher school
27	5,63	Olive oil and fruit	40	х		Higher school
28	4,89	Fruit and vegetables	31		х	Degree
29	6,50	Grape, wine and fruit	64	x		Secondary school
30	4,50	Olive oil and fruit	36	х		Degree
Total	251,68					

and DE GAETANO, 2004). Young farmers are able to respond significantly better to new opportunities and market changes than older entrepreneurs (Parker, 2006) and are able to change their entrepreneurial strategies and skills in order to remain competitive in an increasingly competitive market (PRASHANTHAM and YOUNG, 2013). Our surveyed entrepreneurs had a medium-high level of school education. In particular, 46.6% of farmers had higher school qualifications and 33.4% had a degree, indicating that the adoption of a new entrepreneurial strategy is correlated positively with the level of education (NAJJAR et al., 2013; MANCINI et al., 2008).

#### 3. RESULTS AND DISCUSSION

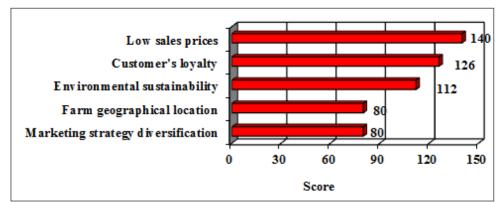
The results showed that direct sales of agrifood products were in all cases a portion of the agricultural production (ranging from 18 to 35%) of the farms we surveyed; the remaining production was marketed through traditional channels (fruit and vegetable wholesale markets, LDO, packing centres). The direct sale was conducted by the entrepreneur or his family (especially women and young people) and was crucial to achieving increases in the remuneration of the enterprise (HENKE and SALVIONI, 2010).

Our empirical survey showed that the majority of farmers (20) sold their products only in farm outlets. This was because it is relatively easy for a farmer to sell his products directly at the place of production; it requires only a simple organization and helps to improve the farm's image (UE-MATSU and MISHRA, 2011). Eight of these farmers also conducted guided tours of their farms, with positive outcomes for the visitors such as nutrition education, the diffusion of rural culture and the valorization of territory and local products (METTEPENNINGEN et al., 2012). The influx of customers was distributed throughout the year, thanks to the Sicilian favourable climatic conditions (GRILLONE et al., 2014; D'ASA-RO and GRILLONE, 2012; AGNESE et al., 2008).

Six of the farmers sold their products exclusively in farmers' markets and four adopted both sales channels. Participation in farmers' markets allowed the entrepreneurs to also sell their agrifood products in urban and periurban areas, thereby promoting their farm and increasing customers and annual revenues (PSARIKIDOU and SZERSZYNSKI, 2012; BRUNORI et al., 2009; BROWN and MILLER, 2008).

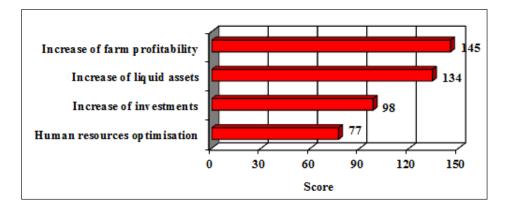
Entrepreneurs adopted direct sales mainly because of the low sale prices of agrifood products, by assigning them the highest score (140) (Fig. 1).

This was essentially attributable to the absence of intermediaries, so that despite the lower gross sales prices for agrifood products compared with conventional markets, the farmers were able to obtain a higher net level of remuneration for their productive factors, by obtaining a competitive advantage (HOLLOWAY et al., 2006; RENTING et al., 2003). They were essentially appropriating a portion of the value that is usually dispersed in the various stages of the long supply chain (BANDARRA, 2011). The second motivation, in order of importance, was customer loyalty with a score equal to 126. This is due to the fact that, compared to the traditional supply chain, direct sales can create a relationship between the consumer and producer that allows the farmer to valorise his production and to transmit his knowledge and links with the territory (GUARINO and DONEDDU, 2011; RENKO et al., 2010). Consumers have the opportunity to purchase agrifood products at lower prices compared to traditional sales channels (SEYFANG, 2008; TAYLOR et al., 2005; KNICKEL and RENT-ING, 2000) and the growth of face-to-face transactions has stimulated the development of markets in the region, which are considered for their status as oppositional sites to the mainstream food industry (SAGE, 2003). The third motivation, in order of importance, was environmental sustainability (112). This denotes a new multifunctional vision of farming that meets the EU guidelines and the new consumer's needs, respecting and recovering territorial, environmental and ecological values (TUDISCA et al., 2013b; RENT-ING et al., 2009; RENTING et al., 2008; THILMANY et al., 2008). Direct sales represent a sustainable alternative as the food miles (the distance between the place of production and consumption) are minimized in passing 'from farm to fork'



Marketing strategy diversification 2 Farm geographical location 2 Environmental sustainabil-Customer's loyalty 4 Low sales prices 5

Fig. 1 - Reasons that led entrepreneurs to adopt direct



Human resources optimisation 2 Increase of investments 3 Increase of liquid assets 4 Increase of farm profitability 5

Fig. 2 - Obtained benefits on the business performance by adopting direct sales.

and the area of distribution is limited. This results in a significant reduction of the negative externalities associated with transport over long distances, such as CO<sub>2</sub> emissions, traffic, road accidents and noise pollution (LANFRANCHI and GIANNETTO, 2013). In contrast to the results of other studies (HARRIS, 2010), farmers assigned to the geographical location of the farm and the diversification of the business marketing strategy the lowest score (80).

Our empirical analysis showed that the farmers felt that the increase in farm profitability was the main benefit to their business performance through the adoption of direct sales. In common with other authors (TRAVERSAC et al., 2011), they assigned it the highest importance by attributing a score equal to 145 (Fig. 2).

Another benefit considered to be of fundamental importance was the increase in liquid assets (134), because timely availability of capital can lead to the adoption of modern technologies, which increase farm production and ultimately the growth rate (RIAZ et al., 2012). The third highest-ranking benefit from adopting direct sales was the increase in investments (98). This was correlated to the increase in farm profitability that allowed for an increase in self-financing and thereby enabled farmers to realize investments (CRNČAN et al., 2011). Finally, the farmers also identified direct sales as an opportunity for human resources optimization, by attributing it a score equal to 77. However, this presupposes that in the farm family there is a state of under-employment, because the possible economic advantage created would otherwise be absorbed by the need to employ external sales staff (TUDISCA et al., 2014d).

Our results showed that farmers who adopted direct sales were able to update their skills and modify the market orientation of their enterprises in order to compete effectively in the current competitive system (FRANK et al., 2012). This highlights the importance of human capital in an enterprise (GURĂU et al., 2010).

Economic importance of direct sales adoption is showed by Table 2. Results denoted that in surveyed farms the net income deriving from the adoption of direct sales ranged from a minimum

Table 2 - Net incomes in surveyed farms

E	NI deriving NI derivi					
Farms (No)	from traditional	from direct sales	% var.			
(140)						
$\vdash$	channels	adoption				
1	6 200 00	7.562.00	22.0			
1	6.200,00	7.563,00	22,0			
2	3.500,00	5.650,00	61,4			
3	4.750,00	5.860,00	23,4			
4	2.500,00	3.052,00	22,1			
5	3.650,00	3.850,00	5,5			
6	5.500,00	6.500,00	18,2			
7	4.750,00	6.523,00	37,3			
8	6.500,00	7.980,00	22,8			
9	7.800,00	9.500,00	21,8			
10	6.520,00	9.562,00	46,7			
11	8.562,00	10.523,00	22,9			
12	7.650,00	9.632,00	25,9			
13	9.560,00	12.065,00	26,2			
14	7.500,00	9.652,00	28,7			
15	9.850,00	13.000,00	32,0			
16	8.950,00	11.250,00	25,7			
17	9.560,00	12.000,00	25,5			
18	10.520,00	12.360,00	17,5			
19	6.500,00	8.500,00	30,8			
20	6.850,00	9.020,00	31,7			
21	5.932,00	7.500,00	26,4			
22	8.952,00	9.650,00	7,8			
23	7.560,00	10.325,00	36,6			
24	12.350,00	14.630,00	18,5			
25	5.900,00	7.500,00	27,1			
26	6.500,00	8.000,00	23,1			
27	4.600,00	6.253,00	35,9			
28	3.678,00	4.321,00	17,5			
29	5.690,00	6.980,00	22,7			
30	3.690,00	5.936,00	60,9			
Courses our presessing of directly collected data						

Source: our processing of directly collected data.

of 3,052.00 to a maximum of 14,630.00 euro.

In all farms, as well as in other studies (HARD-ESTY and LEFF, 2010), it has been highlighted an increase of net income ranged from 5.5 to 60.9% respect to the one deriving from the selling of farm production exclusively through traditional channels. The higher increases were in farms that sold their products both in farm outlets and farmers' markets as they were able to reach a greater number of consumers.

#### 4. CONCLUSIONS

Our results showed that SMEs employing a direct sales strategy are part of an entrepreneurial network characterized by entrepreneurs who have been able to reorient their business strategy in order to remain competitive in the market. The most important reason that has driven entrepreneurs to adopt direct sales was the need to overcome the consistently low sales prices of agrifood products and thereby obtain higher profit margins and create a competitive advantage. The increase in farm profitability resulted in higher liquid assets and an increase in farm investments and enabled the human resources in the farmer's family to be optimized. This highlights the fact that the use of direct sales in agriculture nowadays can have a positive impact on the many components of the territorial system in which it operates. Nevertheless, direct sales cannot be the only marketing strategy for a farm because the produced quantities cannot be absorbed exclusively by local demand. However, direct sales can represent a winning strategy for a farm if it is inserted within a wider business marketing strategy or if this strategy is used in conjunction with traditional sales methods, such as fruit and vegetable wholesale markets and contracts with LOD.

# **ACKNOWLEDGEMENTS**

This paper is a result of the full collaboration of all the authors. However, S. Tudisca wrote Conclusions, A.M. Di Trapani wrote Materials and methods, F. Sgroi wrote Introduction, and R. Testa wrote Results and Discussion.

## REFERENCES

- Agnese C., D'Asaro F., Grillone G. and Drago A. 2008. Comparison of temperature data collected in urban and agricultural areas surrounding. Italian Journal of Agrometeorology (1): 48-49.
- Allen E. and Seaman C. 2007. Likert Scales and Data Analyses. Quality Progress 2007: 64-65.
- Bandarra N.J. 2011. Food processing sector trends. Revue du Marche Commun et de l'Union Europeenne 553: 650-654.
- Briamonte L. and Giuca S. 2010. "Comportamenti e consumi socialmente responsabili nel sistema agroalimentare". INEA, Roma.
- Brown C. and Miller S. 2008. The impacts of local markets: a review of research on farmers' markets and community supported agriculture (CSA). American Journal of Agricultural Economics 90 (5): 1296-1302.

- Brunori G., Rossi A. and Guidi F. 2012. On the New Social Relations around and beyond Food. Analysing Consumers' Role and Action in Gruppi di Acquisto Solidale (Solidarity Purchasing Groups). Sociologia Ruralis 52 (1): 1-30.
- Brunori G., Rossi A., Cerreti R. and Guidi F. 2009. Nicchie produttive e innovazione di sistema: un'analisi secondo l'approccio delle transizioni tecnologiche attraverso il caso dei farmers' markets in Toscana. Economia Agro-alimentare 11 (3): 143-170.
- Brunori G., Cosmina M. and Gallenti G. 2002. Le strade del vino nel Friuli-Venezia Giulia. In "Sviluppo rurale: società, territorio, impresa". E. Basile and D. Romano (Eds.), pp. 398-429. Franco Angeli, Milano.
- Burns A. and Burns R. 2008. "Basic Marketing Research". Pearson Education, New Jersey.
- Bulin D. 2011. Rural tourism A sustainable development key. Quality - Access to Success 12 (Suppl. 1): 381-386.
- Chinnici G., Pecorino B., Rizzo M. and Rapisarda P. 2013a. Evaluation of the performance of wine producers in Sicily. Quality - Access to Success 14 (135): 108-113.
- Chinnici G., Pecorino B. and Scuderi A. 2013b. Enviromental and economic performance of organic citrus growing. Quality - Access to Success 14 (135): 110-112
- Crnčan A., Ranogajec L., Deže J. and Kristić J. 2011. Importance of investments for development of table egg production competitiveness. Poljoprivreda 17 (2): 33-37.
- D'Asaro F. and Grillone G. 2012. Empirical investigation of curve number method parameters in the Mediterranean area. Journal of Hydrologic Engineering 17 (10): 1141-1152.
- Di Trapani A.M., Sgroi F. and Testa R. 2013. La filiera corta: una possibile strategia per migliorare la competitività dell'azienda agraria. Economia Agroalimentare 15 (2): 35-49.
- Feagan R. 2008. Direct Marketing: Towards Sustainable Local Food Systems? Local Environment 13 (3): 161-167.
- Feagan R. 2007. The place of food: mapping out the 'local' in local food systems. Progress in Human Geography 31 (1): 23-42.
- Frank H., Kessler A. and Korunka C. 2012. The impact of market orientation on family firm performance. International Journal of Entrepreneurship and Small Business 16 (4): 372-385.
- Grillone G., Baiamonte G. and D'Asaro F. 2014. Empirical determination of the average annual runoff coefficient in the mediterranean area. American Journal of Applied Sciences 11 (1): pp. 89-95.
- Guarino A. and Doneddu, S. 2011. Agricoltura e turismo: nuove reciprocità in aree svantaggiate del mediterraneo. Agriregionieuropa 27: 79-80.
- Gura u C., Dana L.P. and Lasch F. 2010. Human capital for successful entrepreneurial ventures: The profile of the top management team (TMT) in UK biopharmaceutical SMEs. International Journal of Entrepreneurship and Small Business 11 (4): 436-454.
- Hardesty S.D. and Leff P. 2010. Determining marketing costs and returns in alternative marketing channels. Renewable Agriculture and Food Systems 25 (1): 24-34.
- Harris E.M. 2010. Eat Local? Constructions of place in alternative food politics. Geography Compass 4 (4): 355-369.
- Harvey M., McMeekin A. and Warde A. 2004. "Qualities of food". Manchester University Press, Manchester.
- Henke R. and Salvioni C. 2010. Diffusione, struttura e redditività delle aziende multifunzionali. Agriregionieuropa 20: 16-19.
- Hinrichs C. 2003. The practice and politics of food system localisation. Journal of Rural Studies 19: 33-45.
- Holloway L. 2008. Alternative food networks. Geography Review 22 (2): 10-12.
- Holloway L., Cox R., Venn L., Kneafsey M., Dowler E. and Tuomainen H. 2006. Managing sustainable farmed land-scape through 'alternative' food networks: A case study from Italy. Geographical Journal 172 (3): 219-229.
- Knickel K. and Renting H. 2000. Methodological and conceptual issues in the study of multifunctionality and rural development. Sociologia Ruralis 40 (4): 512-528.
- Lanfranchi M. and Giannetto C. 2013. Analysis of the economic evaluation of an Italian farm in response to the economic financial crisis that the EU is going through. Quality - Access to Success 14 (SUPPL. 2): 119-124.

- Likert R. 1932. A Technique for the Measurement of Attitudes. Archives of Psychology 140: 1-55.
- Little J., Ilbery B. and Watts D. 2009. Gender, consumption and the relocalisation of food: a research agenda. Sociologia Ruralis 49 (3): 201-217.
- Mancini F., Termorshuizen A.J., Jiggins J.L.S. and van Bruggen A.H.C. 2008. Increasing the environmental and social sustainability of cotton farming through farmer education in Andhra Pradesh, India. Agricultural Systems 96 (1-3): 16-25.
- Marbach G. 2000. "Le ricerche di mercato". UTET, Torino.
- Massoli B. and De Gaetano L. 2004. L'invecchiamento dei conduttori agricoli e le difficoltà del ricambio generazionale. In "La liberalizzazione degli scambi dei prodotti agricoli tra conflitti ed accordi: il ruolo dell'Italia". E. De Francesco (Ed.), pp. 503-518. FrancoAngeli, Milano.
- Mettepenningen E., Vandermeulen V., Van Huylenbroeck G., Schuermans N., Van Hecke E., Messely L., Dessein J. and Bourgeois M. 2012. Exploring Synergies between Place Branding and Agricultural Landscape Management as a Rural Development Practice. Sociologia Ruralis 52 (4): 432-452.
- Najjar D., Spaling H. and Sinclair A.J. 2013. Learning about sustainability and gender through Farmer Field Schools in the Taita Hills, Kenya. International Journal of Educational Development 33 (5): 466-475.
- Norman G. 2010. Likert scales, levels of measurement and the "laws" of statistics". Advances in Health Science Education 15 (5): 625-632.
- Parker S.C. 2006. Learning about the unknown: How fast do entrepreneurs adjust their beliefs? Journal of Business Venturing 21 (1): 1-26.
- Peter A., Dibden J., Higgins V. and Cocklin C. 2010. Competitive productivism and Australia's emerging 'alternative' agri-food networks: Producing for farmers' markets in Victoria and beyond. Australian Geographer 41 (3): 307-322.
- Polidori R., Marangon F. and Romano S. 2008. Local production systems and quality food: Resources, constraints, strategies. Italian Journal of Agronomy 3 (1 SUPPL.): 45-55.
- Prashantham S. and Young S. 2013. The internet and the internationalisation of small knowledge-intensive firms: promises, problems and prospects. International Journal of Entrepreneurship and Small Business 20 (1): 153-175.
- Psarikidou K. and Szerszynski B. 2012. Growing the social: Alternative agrofood networks and social sustainability in the urban ethical foodscape. Sustainability: Science, Practice, and Policy 8 (1): 30-39.
- Raffaelli R., Coser L. and Gios G. 2009. Esperienze di filiera corta nell'agro-alimentare: un'indagine esplorativa in provincia di Trento. Economia Agro-alimentare 11 (1): 25-42.
- Renko S., Renko N. and Polonijo T. 2010. Understanding the Role of Food in Rural Tourism Development in a Recovering Economy. Journal of Food Products Marketing 16 (3): 309-324.
- Renting H., Rossing W.A.H., Groot J.C.J., Van der Ploeg J.D., Laurent C., Perraud D., Stobbelaar D.J. and Van Ittersum M.K. 2009. Exploring multifunctional agriculture. A review of conceptual approaches and prospects for an integrative transitional framework. Journal of Environmental Management 90 (SUPPL. 2): S112-S123.
- Renting H., Marsden T.K. and Banks J. 2003. Understanding alternative food networks: Exploring the role of short food supply chains in rural development. Environment and Planning A 35 (3): 393-411.
- Renting H., Oostindie H., Laurent C., Brunori G., Barjolle D., Jervell A.M., Granberg L. and Heinonen M. 2008. Multifunctionality of agricultural activities, changing rural identities and new institutional arrangements. International Journal of Agricultural Resources, Governance and Ecology 7 (4-5): 361-385.
- Riaz A., Khan G.A. and Ahmad M. 2012. Utilization of agriculture credit by the farming community of Zarai Tariqiati Bank Limited (ZTBL) for agriculture development. Pakistan Journal of Agricultural Sciences 49 (4): 557-560.
- Rizzo M. and Giudice V.L. 2013. Structural analysis of forms of local partnership in the Val d'Anapo area. Quality - Access to Success 14 (SUPPL. 1): 188-193.
- Rizzo M. and Mazzamuto F. 2009. La vendita diretta dei

- prodotti ortofrutticoli un'esperienza siciliana. Economia Agro-alimentare 11 (1): 97-119.
- Saccomandi V. 1999. "Economia dei mercati agricoli". Il Mulino, Bologna.
- Sage C. 2003. Social embeddedness and relations of regard: Alternative 'good food' networks in south-west Ireland. Journal of Rural Studies 19 (1): 47-60.
- Santeramo F.G., Di Pasquale J., Contò F., Tudisca S. and Sgroi F. 2012. Analyzing risk management in Mediterranean Countries: the Syrian perspective. New Medit 11
- Sevfang G. 2008. Avoiding Asda? Exploring consumer motivations in local organic food networks. Local Environment 13 (3): 187-201.
- Sonnino R. and Marsden T. 2006. Alternative Food Networks in the South West of England: Towards a New Agrarian Eco-Economy? Research in Rural Sociology and Development 12: 299-322.
- Sturiale L. and Scuderi A. 2013. Evaluation of Social Media Actions for the Agrifood System. Procedia Technology: 200-208.
- Taylor J., Madrick M. and Collin S. 2005. "Trading places: the local economic impact of street produce and farmers markets". New Economics Foundation, London.
- Thilmany D., Bond C.A. and Keeling-Bond J. 2008. Going Local: Exploring Consumer Behavior and Motivations for Direct Food Purchases. American Journal of Agricultural Economics 90 (5): 1303-1309.
- Trabalzi F. and De Rosa M. 2012. Market and State-supported Sustainability: A Tale of Two Rural Communities in Iowa and Italy. Sociologia Ruralis 52 (1): 115-133.
- Traversac J.B., Rousset S. and Perrier-Cornet P. 2011. Farm resources, transaction costs and forward integration in agriculture: Evidence from French wine producers. Food Policy 36 (6): 839-847.
- Tudisca S., Di Trapani A.M., Donia E., Sgroi F. and Testa R. 2014a. Entrepreneurial strategies of Etna wine farms. International Journal of Entrepreneurship and Small Business 21 (2): 155-164.
- Tudisca S., Di Trapani A.M., Sgroi F. and Testa R. 2014b. Organic farming and economic sustainability. The case of Sicilian durum wheat. Quality - Access to Success 14 (138): 93-96.
- Tudisca S., Di Trapani A.M., Sgroi F. and Testa R. 2014c. Economic evaluation of PDO introduction in Sicilian orange farms. Quality - Access to Success 14 (139): 99-103.
- Tudisca S., Di Trapani A.M., Sgroi F., Testa R. and Giamporaro G. 2014d. Role of Alternative Food Networks in Sicilian farms. International Journal of Entrepreneurship and Small Business 22 (1): pag. 50-63.
- Tudisca S., Di Trapani A.M., Sgroi F. and Testa R. 2013a. The cost advantage of Sicilian wine farms. American Journal of Applied Sciences 10 (12): 1529-1536.
- Tudisca S., Di Trapani A.M., Sgroi F., Testa R. and Squatrito R. 2013b. Economic analysis of PV systems on buildings in Sicilian farms. Renewable and Sustainable Energy Reviews 28: 691-701.
- Tudisca S., Di Trapani A.M., Sgroi F. and Testa R. 2013c. Marketing strategies for Mediterranean wineries' competitiveness: the case of Pantelleria. Quality - Access to Success 14 (137): 101-106.
- Tudisca S., Sgroi F. and Testa R., 2011. Competitiveness and sustainability of extreme viticulture in Pantelleria Island. New Medit 10 (4): 57-64.
- Uematsu H. and Mishra A.K. 2011. Use of Direct Marketing Strategies by Farmers and Their Impact on Farm Business Income. Agricultural and Resource Economics Review 40 (1): 1-19.
- Van Passel S. 2013. Food miles to assess sustainability: a revision. Sustainable Development 21 (1): 1-17.
- Veidal A. and Korneliussen T. 2013. Entrepreneurial orientation and market orientation as antecedents of organisational innovation and performance. International Journal of Entrepreneurship and Small Business 19 (2): 234-250.
- Winter M. 2003. Embeddedness, the new food economy and defensive localism. Journal of Rural Studies 19: 23-32.